Research Report

Misery Is Not Miserly

Sad and Self-Focused Individuals Spend More

Cynthia E. Cryder,[1] Jennifer S. Lerner,[2] James J. Gross,[3] and Ronald E. Dahl[4]

[1]*Carnegie Mellon University,* [2]*Harvard University,* [3]*Stanford University, and* [4]*University of Pittsburgh*

ABSTRACT—***Misery is not miserly: Sadness increases the amount of money that decision makers give up to acquire a commodity. The present research investigated when and why the misery-is-not-miserly effect occurs. Drawing on William James's concept of the material self, we tested a model specifying relationships among sadness, self-focus, and the amount of money that decision makers spend. Consistent with our Jamesian hypothesis, results demonstrated that the misery-is-not-miserly effect occurs only when self-focus is high. That is, self-focus moderates the effect of sadness on spending. Moreover, mediational analyses revealed that, at sufficiently high levels, self-focus mediates (explains) the relationship between sadness and spending. Because the study used real commodities and real money, the results hold implications for everyday decisions, as well as implications for the development of theory. For example, economic theories of spending may benefit from incorporating psychological theories—specifically, theories of emotion and the self—into their models.***

> A man's Self is the sum total of all that he CAN call his, not only his body and his psychic powers, but his clothes and his house . . . his lands and horses, and yacht and bank-account. All these things give him the same emotions. (James, 1890, p. 291)

Since William James's classic work (1890), the self has been regarded as one of the most important concepts in psychology. A survey of psychology articles published between 1974 and 1993 found more than 31,000 articles that addressed the self (Ashmore & Jussim, 1997). Baumeister's (1998) authoritative review on the self for the *Handbook of Social Psychology* reported that "trying to keep abreast of the research on the self is like trying to get a drink from a fire hose" (p. 681).

Address correspondence to Cynthia Cryder, Carnegie Mellon University, Porter Hall 208, Pittsburgh, PA 15213, e-mail: ccryder@andrew.cmu.edu.

Despite the central role that theories of the self play in psychology, the rapidly emerging field of behavioral economics (i.e., the application of psychological insights to economics) has had relatively few contributions drawing on theories of the self (notable exceptions include Babcock & Loewenstein, 1997; Beggan, 1992; Diekmann, Samuels, Ross, & Bazerman, 1997; and Larrick, 1993). The lack of empirical work connecting the self to economic choices is surprising given that James (1890) posited more than one century ago that material goods play a crucial role in defining the self. Indeed, James held that losing material possessions has an influence so strong that it results in "a sense of shrinkage of our personality, a partial conversion of ourselves to nothingness" (p. 293).

James (1890) also hypothesized a close connection between the self (broadly construed to include possessions) and emotion. He did not, however, connect the self with specific emotions and specific material decisions, nor did he have the opportunity to present empirical support for his views. In this article, we examine potential empirical connections among emotion, the self, and material decisions in the context of the misery-is-not-miserly effect.

THE MISERY-IS-NOT-MISERLY EFFECT AND THEORIES OF THE SELF

The misery-is-not-miserly effect is the tendency for sadness to carry over from past situations to influence normatively unrelated economic decisions, increasing the amount of money that decision makers give up to receive a commodity. In one study, for example, decision makers who received a sadness induction subsequently gave up 30% more money to acquire a commodity than did those who received a neutral induction (Lerner, Small, & Loewenstein, 2004). It is important to emphasize that the misery-is-not-miserly effect, like other emotion-carryover effects, involves incidental emotion, that is, emotion that should be irrelevant to the decision at hand (see Loewenstein & Lerner, 2003).

Perhaps the most curious thing about the misery-is-not-miserly effect is that it runs counter to predictions from valence-based and mood-congruent theories of decision making. According to these theories, negative moods lead people to globally devalue what they perceive. Such devaluation could appear in contexts such as stock-market decisions (Hirschleifer & Shumway, 2003) or life-satisfaction judgments (Schwarz & Clore, 1983; for a review, see Loewenstein & Lerner, 2003). Empirically, however, the effects of sadness on buying run counter to the predicted pattern. Even though sadness is negatively valenced, it leads people to increase, rather than decrease, their valuation of commodities that they might purchase (Lerner et al., 2004).

Why might sadness elicit behaviors that are inconsistent with valence-based predictions? One possibility is that, in contrast to some other negative emotions, sadness has an intimate connection with the self. Previous work has demonstrated that sadness inductions can trigger increased self-focus (Salovey, 1992; Wood, Saltzberg, & Goldsamt, 1990) and can do so even without producing the conscious experience of sadness (Silvia, Phillips, Baumgaertner, & Maschauer, 2006).

The present study investigated the hypothesis that the experience of feeling sad and self-focused leads individuals to pay more for commodities than they otherwise would. As shown in Figure 1, our model suggests that a sad event, coupled with self-focus, triggers an implicit devaluation or diminished sense of self (for a possible analogue in depression, see Blumberg & Hokanson, 1983). Self-devaluation, in turn, triggers an implicit desire to enhance the self. Finally, the desire to enhance the self elicits increased valuation of possessions that one might acquire. In sum, we predicted that when self-focus is high, sad individuals experience an implicit devaluation of the self, which in turn triggers increased valuation of new commodities.

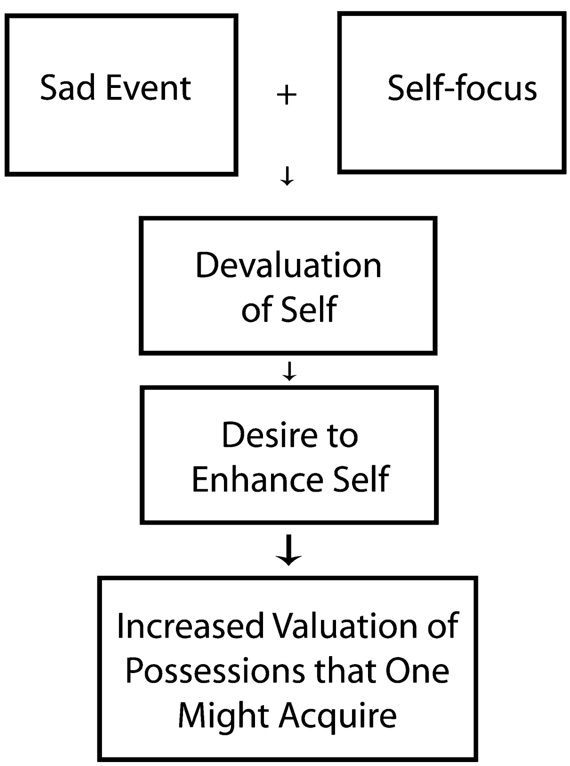

Fig. 1. A conceptual model of how sadness and self-focus influence valuation of material possessions.

GOALS OF THE PRESENT STUDY

The primary goal of the present study was to test two main implications of our model. First, the study examined whether the misery-is-not-miserly effect depends on one's level of self-focus (i.e., does self-focus moderate the misery-is-not-miserly effect?). Second, the study tested whether self-focus explains the misery-is-not-miserly effect (i.e., does self-focus mediate the misery-is-not-miserly effect?).

A secondary goal was to examine the generalizability of the misery-is-not-miserly effect. Whereas previous research investigated the effect by measuring the amount of cash individuals would forgo to receive a commodity (i.e., their *choice prices*; Lerner et al., 2004), the current research investigated the effect by assessing a more common choice, the amount of their own money that participants would give up in order to receive a commodity (i.e., their *buying prices*; see Kahneman, Knetsch, & Thaler, 1991).

METHOD

Participants

Thirty-three participants (13 females, 20 males) were recruited through an advertisement offering $10 for participation. Participants' ages ranged from 18 to 30 years (M = 21.2).

Procedure

Participants received their $10 payment upon arrival. They sat in individual cubicles, each equipped with a computer and headphones. For screening purposes, participants first completed an assessment of their fluency in English and a baseline measure of emotion. They then completed three separate tasks, which they were told had been combined for convenience.

Emotion Induction

Participants were randomly assigned to the sad or neutral condition. *Sad-condition* participants watched a video clip about the death of a boy's mentor (from *The Champ*). *Neutral-condition* participants watched a video clip about the Great Barrier Reef (from a National Geographic television special). Both clips had previously been validated as inducing the intended emotion (Gross & Levenson, 1995; Lerner et al., 2004). Each clip lasted less than 4 min.

Self-Focused Essay

Following established emotion-induction procedures, we next asked all participants to complete an essay focused on the self (see Lerner et al., 2004). Sad-condition participants wrote about how a situation like the one portrayed in the video clip would affect them personally. Neutral-condition participants wrote about their daily activities.

To estimate each individual's self-focus, two independent coders, blind to hypotheses, counted and summed the frequency of the following self-references in the essays: *I*, *me*, *my*, and *myself* (also see Campbell & Pennebaker, 2003). Intercoder consistency was nearly perfect, $r = .98$, $p < .001$, $p_{rep} = .99$.

Buying Task
For the final task, participants were shown a sporty, insulated water bottle. Then, following standard price-elicitation procedures from experimental economics (see Becker, DeGroot, & Marschak, 1964), participants chose between buying or not buying the water bottle at prices ranging from \$0 to \$10 in 50¢ increments. So that participants would be motivated to reveal true values, we informed them that at the end of the session, one price option would be randomly selected as the actual price for which they could buy the water bottle (see Becker et al., 1964).[1] Participants were informed that their choices were "for real" and that if they indicated they wished to buy the water bottle for the price that turned out to be the actual price at the end of the experiment, they would exchange that portion of their participation payment for the water bottle. They were also told that if they indicated that they did not wish to buy the water bottle for the price that turned out to be the actual price, they would keep their entire participation payment. The maximum amount that participants were willing to pay for the water bottle served as the *buying price*, that is, the main dependent variable.

Manipulation Check and Debriefing
Immediately after the buying task, participants reported how intensely they felt 19 emotions; 6 were of primary interest.[2] We calculated a composite score for sadness by averaging responses to "blue," "sad," and "depressed" ($\alpha = .88$) and a composite score for neutral emotion by averaging responses to "indifferent," "neutral," and "unemotional" ($\alpha = .85$).

Next, participants completed demand-awareness questions. To encourage truthful responses, we told participants that if they guessed the study's hypotheses, they would receive a \$5 gift certificate that could be used at Amazon.com. No participant correctly guessed the hypotheses.

Finally, participants learned the randomly selected price for the water bottle. If their responses on the buying task indicated that they would buy the water bottle at that price, they paid that price out of their participation payment and received the water bottle in return. If their responses on the buying task indicated that they would not buy the water bottle at that price, they kept their entire participation payment.

[1]By using a randomly generated price for the water bottle, instead of the market price, we discouraged participants from attempting to get a "deal" by reporting buying prices lower than the market price (see Becker et al., 1964).

[2]We administered the check of the emotion manipulation after the measure of our main dependent variable because labeling one's feelings after incidental-emotion inductions can reduce the effect of such emotions (Keltner, Locke, & Audrain, 1993; Schwarz & Clore, 1983).

RESULTS[3]

Manipulation Checks
The emotion inductions were effective in terms of both magnitude and specificity. Neutral-condition participants reported feeling significantly more neutral than sad (mean composite scores = 4.2 vs. 1.4, respectively), $t(13) = 3.29$, $p < .01$, $p_{rep} = .96$. Sad-condition participants reported feeling significantly more sad than neutral (mean composite scores = 4.6 vs. 2.2, respectively), $t(16) = 5.42$, $p < .001$, $p_{rep} = .99$. Also, sad-condition participants' composite scores for sad feelings were significantly higher than their composite scores for all other measured negative emotions, including anger ($M = 2.6$), $p = .001$, $p_{rep} = .99$; disgust ($M = 2.5$), $p = .001$, $p_{rep} = .99$; and fear ($M = 2.5$), $p = .001$, $p_{rep} = .99$.

Main Analyses
Sad-condition participants set higher buying prices than did neutral-condition participants (*M*s = \$2.11 vs. \$0.56, respectively), $t(29) = 4.02$, $p = .001$, $p_{rep} = .99$, $d = 1.41$. Thus, the effect of sadness observed using our buying-price paradigm parallels the effect of sadness observed using the choice-price paradigm (see Lerner et al., 2004). In fact, the effect of sadness on valuation in our buying-price paradigm was significantly larger ($d = 1.41$) than the effect of sadness in the original choice-price paradigm ($d = 0.48$), $\chi^2(1, N = 98) = 4.1$, $p < .05$.

To test the hypothesized moderating role of self-focus, we conducted a regression analysis predicting buying price with emotion condition, self-focus score (centered), and their interaction term. Results revealed an Emotion Condition × Self-Focus interaction, $b = 0.16$, $t(27) = 2.29$, $p = .03$, $p_{rep} = .91$ (see Fig. 2a). As hypothesized, tests of simple slopes (Aiken & West, 1991) revealed that buying prices did not vary with emotion condition at low levels ($SD = -1$) of self-focus, $b = 0.25$, $t(27) = 0.50$, $p = .62$, $p_{rep} = .41$, but that being in the sadness condition was positively associated with buying prices at high levels ($SD = +1$) of self-focus, $b = 2.17$, $t(27) = 3.48$, $p < .01$, $p_{rep} = .98$.

Although this interaction was consistent with our theoretical expectations, it was possible that the results were an artifact of the experimental conditions. To confirm that the interaction was due to the experience of actual sadness and was not an artifact, we calculated a second interaction model, substituting self-reported sadness (centered) for emotion condition. Consistent with the idea that the actual experience of sadness drove the observed effect, results revealed a significant interaction between self-reported sadness and self-focus, $b = 0.03$, $t(30) = 2.32$, $p < .03$, $p_{rep} = .91$ (see Fig. 2b). Tests of simple slopes revealed no association between sadness and buying price at low levels of self-focus, $b = 0.07$, $t(27) = 0.54$, $p = .59$, $p_{rep} = .44$, but a positive

[3]Data analyses excluded 2 individuals because they misunderstood the instructions and asked to redo the buying task.

Fig. 2. Buying price as a function of (a) self-focus and emotion condition and (b) self-focus and self-reported sadness.

association between sadness and buying price at high levels of self-focus, $b = 0.43$, $t(27) = 3.17$, $p < .01$, $p_{rep} = .97$.

Next, we conducted analyses examining the mediational, or explanatory, role of self-focus (see Baron & Kenny, 1986). Results revealed that self-focus mediated the relationship between emotion condition and buying price (Sobel test statistic = 2.00, $p < .05$, $p_{rep} = .88$). A second analysis confirmed that this relationship held when self-reported sadness was substituted for emotion condition (Sobel test statistic = 2.05, $p < .05$, $p_{rep} = .89$). Figure 3 presents parameter estimates for both mediational models.

Our findings are consistent with Judd, Kenny, and McClelland's (2001; see also Judd & Kenny, 1981) claim that a variable can serve as both a moderator and a mediator for a single relationship. We found that self-focus plays both a moderating and a mediating role in the relationship between sadness and buying price. However, because we did not observe an effect of sadness on buying price when self-focus was low, the mediation results should be interpreted as holding only for average and above-average levels of self-focus (C.M. Judd, personal communication, August 13, 2007).[4]

GENERAL DISCUSSION

The current study tested models examining relationships among incidental emotion, the self, and spending decisions. Results demonstrated that the misery-is-not-miserly effect occurs only when self-focus is high. That is, self-focus moderates the effect of sadness on spending. Moreover, mediational analyses revealed that, at sufficiently high levels, self-focus mediates (explains) the relationship between sadness and spending. Finally, results showed that sadness and self-focus influence individuals' actual buying prices, not only their choice prices (see Lerner et al., 2004).

By revealing that self-focus plays both a moderating and a mediating role in the relationship between sadness and spending, the findings connect James's (1890) concept of the material self to contemporary theories of emotion and decision making. Spending decisions have been addressed primarily by economic theories, but the present results highlight a central role for psychological theories of emotion and the self.

Alternative Explanations

It may appear, contrary to our Jamesian account, that existing theories of mood repair (e.g., Clark & Isen, 1982) provide an alternative explanation for the present results. According to mood-repair theories, individuals in a negative emotional state are predisposed to engage in mood-improving behaviors, such as helping other people, or potentially obtaining new commodities. These theories make no mention of self-focus, however, and therefore do not explain the pattern of our data. Moreover, the misery-is-not-miserly effect occurs even after participants receive an effective happiness induction (Garg & Lerner, 2006); that is, the effect persists after a mood-repairing event.

The present findings do, however, allow more than one explanation for the links among sadness, self-focus, and spending. Our working model (see Fig. 1) proposes that sad and self-focused individuals spend more on commodities than other people do because they seek self-enhancement. Another possible model is that sad and self-focused individuals experience reduced self-value or reduced sense of entitlement, and therefore value other things more by contrast. This contrasting-value model could be tested in future studies by examining whether sad and self-focused people value objects more than other people do even when they cannot receive the objects (and therefore have no opportunity for self-enhancement). Results supporting either model would have important implications for models of sadness and choice.

Implications for Related Literatures

The present findings have implications for theories from a variety of disciplines. For example, the results demonstrate that

[4]A second study closely replicated the methods and findings of the study reported here.

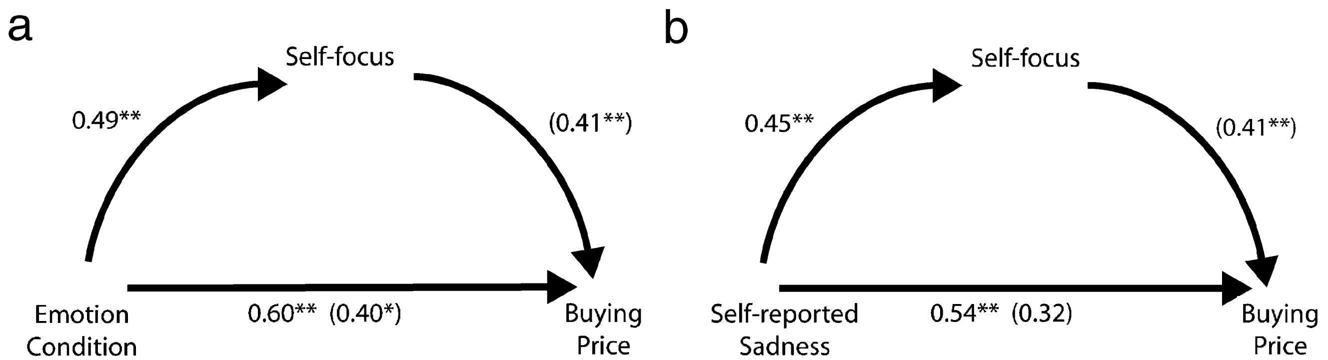

Fig. 3. Models of self-focus as a mediator of (a) the effect of emotion condition on buying price and (b) the effect of self-reported sadness on buying price. In each panel, the coefficients without parentheses are parameter estimates from a simple linear regression model, and the coefficients in parentheses are parameter estimates from a regression model containing both predictors. Asterisks indicate parameter estimates significantly different from zero, $^{*}p < .05$ and $^{**}p < .01$.

valence-based models of affect and decision making require updating. Valence-based models of emotion predict that negative emotions elicit global devaluation of objects that are perceived. However, the misery-is-not-miserly effect shows a different pattern: When self-focus is sufficiently high, sadness increases valuation of purchasable commodities. The current findings imply that valence, although a powerful dimension of emotion, needs to be considered in the context of self-processes for predictions of behavior to be accurate.

The results also hold implications for models of clinical depression. Depression, like sadness, is associated with increased self-focus (Ingram, 1990; Watkins & Teasdale, 2004) and a diminished sense of self-worth (Gotlib & Hammen, 1992; Watkins & Teasdale, 2001). Future studies could explicitly test the role of self-focus and self-devaluation in both sad and depressed individuals' decisions. Results from these studies might clarify the relationship between sadness and depression, reveal common decision processes underlying sadness and depression, and suggest new clinical interventions concerning depression and decision making.

Conclusion

In conclusion, the present findings bring James's (1890) classic concept of the material self into modern theorizing at the intersection of psychology and behavioral economics. Combining methods from economics with theories from psychology reveals the benefit of a multidisciplinary approach to understanding emotional and cognitive influences on decision making.

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